

In the Claims:

1. (previously amended) A method for determining cell/sector pair radio frequency isolation values in a cellular wireless communication system, the method comprising:

transmitting on a broadcast channel in a broadcast cell/sector;

disabling transmissions on the broadcast channel in neighboring cells/sectors;

directing a plurality of mobile stations operating within the cellular wireless communication system to measure the strength of the broadcast channel and to measure the strength of respective serving traffic channels;

receiving the measured strengths of the broadcast channel and respective serving traffic channels from the plurality of mobile stations; and

using the measured strengths of the broadcast channel and respective serving traffic channels to determine cell/sector pair radio frequency isolation values.

2. (original) The method of claim 1, further comprising disabling adjacent channels in the broadcast cell/sector.

3. (original) The method of claim 1, further comprising disabling adjacent channels in at least some of the neighboring cells/sectors.

4. (original) The method of claim 1, further comprising:
normalizing a measured strength of the broadcast channel to produce a normalized broadcast channel signal strength;

calculating a cell/sector pair radio frequency isolation value using the normalized broadcast

channel signal strength and a measured strength of the serving traffic channel.

5. (original) The method of claim 1, further comprising:

repeating the previous steps for a plurality of cell/sectors in the cellular wireless communication system to produce a plurality of measured cell/sector pair radio frequency isolation values; and

processing the plurality of measured cell/sector pair radio frequency isolation values to create an isolation matrix.

C | 6. (previously amended) The method of claim 1, wherein directing a plurality of mobile stations operating within the cellular wireless communication system to measure the strength of the broadcast channel and to measure the strength of respective serving traffic channels comprises issuing a mobile assisted handoff message to the plurality of mobile stations.

7. (previously amended) The method of claim 1, wherein directing a plurality of mobile stations operating within the cellular wireless communication system to measure the strength of the broadcast channel and to measure the strength of respective serving traffic channels may alternately comprise issuing a mobile assisted channel assignment message to the plurality of mobile stations.

8. (original) The method of claim 1, wherein directing a plurality of mobile stations operating within the cellular wireless communication system to measure the strength of the broadcast channel and to measure the strength of respective serving traffic channels includes

limiting such direction to mobile stations operating within a distance of the broadcast cell/sector.

9. (original) A system-engineering server operating in conjunction with a cellular wireless communication system, the system-engineering server comprising:

a processor;

memory coupled to the processor;

an interface coupled to the processor that allows the system-engineering system server to interact with the cellular wireless communication system; and

the memory storing a plurality of instructions, the plurality of instructions comprising:

C1 a plurality of instructions that, upon execution by the processor, cause the cellular wireless communication system to transmit on a broadcast channel in a broadcast cell/sector;

a plurality of instructions that, upon execution by the processor, cause the cellular wireless communication system to disable transmissions on the broadcast channel in neighboring cells/sectors;

a plurality of instructions that, upon execution by the processor, cause the cellular wireless communication system to direct a plurality of mobile stations operating within the cellular wireless communication system to measure the strength of the broadcast channel and to measure the strength of respective serving traffic channels;

a plurality of instructions that, upon execution by the processor, cause the cellular wireless communication system to receive the measured strengths of the broadcast channel and respective serving traffic channels from the plurality of mobile stations; and

a plurality of instructions that, upon execution by the processor, cause the cellular wireless communication system to use the measured strengths of the broadcast channel and

respective serving traffic channels to determine cell/sector pair radio frequency isolation values.

10. (original) The system-engineering server of claim 9, further comprising a plurality of instructions that, upon execution by the processor, cause the cellular wireless communication system to disable adjacent channels in the broadcast cell/sector.

11. (original) The system-engineering server of claim 9, further comprising a plurality of instructions that, upon execution by the processor, cause the cellular wireless communication system to disable adjacent channels in at least some of the neighboring cells/sectors.

12. (original) The system-engineering server of claim 9, further comprising, for measurements taken in a particular cell other than the broadcast cell:

a plurality of instructions that, upon execution by the processor, cause the cellular wireless communication system to normalize a measured strength of the broadcast channel to produce a normalized broadcast channel signal strength;

a plurality of instructions that, upon execution by the processor, cause the cellular wireless communication system to calculate a cell/sector pair radio frequency isolation value using the normalized broadcast channel signal strength and a measured strength of the serving traffic channel.

13. (original) The system-engineering server of claim 9, further comprising:

a plurality of instructions that, upon execution by the processor, cause the cellular wireless communication system to repeat the previous operations for a plurality of cell/sectors in the cellular wireless communication system to produce a plurality of measured cell/sector pair radio frequency

isolation values; and

a plurality of instructions that, upon execution by the processor, cause the cellular wireless communication system to process the plurality of measured cell/sector pair radio frequency isolation values to create an isolation matrix.

14. (original) The system-engineering server of claim 9, wherein directing a plurality of mobile stations operating within the cellular wireless communication system to measure the strength of the broadcast channel and to measure the strength of respective serving traffic channels comprises issuing a mobile assisted handoff message to the plurality of mobile stations.

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15. (original) The system-engineering server of claim 9, wherein directing a plurality of mobile stations operating within the cellular wireless communication system to measure the strength of the broadcast channel and to measure the strength of respective serving traffic channels comprises issuing a mobile assisted channel assignment message to the plurality of mobile stations.

16. (original) The system-engineering server of claim 9, wherein directing a plurality of mobile stations operating within the cellular wireless communication system to measure the strength of the broadcast channel and to measure the strength of respective serving traffic channels includes limiting such direction to mobile stations operating within a distance of the broadcast cell/sector.

17. (original) A computer readable medium that stores a plurality of software instructions that, when executed by a computer interfacing with a cellular wireless communication system, causes the cellular wireless communication system to determining cell/sector pair radio

frequency isolation, the computer readable medium comprising:

a plurality of instructions that, upon execution by the computer, cause the cellular wireless communication system to transmit on a broadcast channel in a broadcast cell/sector;

a plurality of instructions that, upon execution by the computer, cause the cellular wireless communication system to disable transmissions on the broadcast channel in neighboring cells/sectors;

a plurality of instructions that, upon execution by the computer, cause the cellular wireless communication system to direct a plurality of mobile stations operating within the cellular wireless communication system to measure the strength of the broadcast channel and to measure the strength of respective serving traffic channels;

a plurality of instructions that, upon execution by the computer, cause the cellular wireless communication system to receive the measured strengths of the broadcast channel and respective serving traffic channels from the plurality of mobile stations; and

a plurality of instructions that, upon execution by the computer, cause the cellular wireless communication system to use the measured strengths of the broadcast channel and respective serving traffic channels to determine cell/sector pair radio frequency isolation values

18. (original) The computer readable medium of claim 17, further comprising a plurality of instructions that, upon execution by the computer, cause the cellular wireless communication system to disable adjacent channels in the broadcast cell/sector.

19. (original) The computer readable medium of claim 17, further comprising a plurality of instructions that, upon execution by the computer, cause the cellular wireless communication

system to disable adjacent channels in at least some of the neighboring cells/sectors.

20. (original) The computer readable medium of claim 17, further comprising:

a plurality of instructions that, upon execution by the computer, cause the cellular wireless communication system to normalize a measured strength of the broadcast channel to produce a normalized broadcast channel signal strength;

C1 a plurality of instructions that, upon execution by the computer, cause the cellular wireless communication system to calculate a cell/sector pair radio frequency isolation value using the normalized broadcast channel signal strength and a measured strength of the serving traffic channel.

21. (original) The computer readable medium of claim 17, further comprising:

a plurality of instructions that, upon execution by the computer, cause the cellular wireless communication system to repeat the previous steps for a plurality of cell/sectors in the cellular wireless communication system to produce a plurality of measured cell/sector pair radio frequency isolation values; and

a plurality of instructions that, upon execution by the computer, cause the cellular wireless communication system to process the plurality of measured cell/sector pair radio frequency isolation values to create an isolation matrix.

22. (original) The computer readable medium of claim 17, wherein directing a plurality of mobile stations operating within the cellular wireless communication system to measure the strength of the broadcast channel and to measure the strength of respective serving traffic channels comprises issuing a mobile assisted handoff message to the plurality of mobile stations.

23. (original) The computer readable medium of claim 17, wherein directing a plurality of mobile stations operating within the cellular wireless communication system to measure the strength of the broadcast channel and to measure the strength of respective serving traffic channels comprises issuing a mobile assisted channel assignment message to the plurality of mobile stations.

C1 24. (original) The computer readable medium of claim 17, wherein directing a plurality of mobile stations operating within the cellular wireless communication system to measure the strength of the broadcast channel and to measure the strength of respective serving traffic channels includes limiting such direction to mobile stations operating within a distance of the broadcast cell/sector.
